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Press Message

Safety and Security in transformation

Ostfildern, 16.05.2024 - **Thomas Pilz**

(Check against delivery)

Pilz is an automation company. Our core competence is safety. Every day, our mission is to make the world more digital, connected, flexible, efficient, safe and secure. We want to contribute towards ensuring that the transformation of industry can succeed.

Certain industries are affected more strongly by this transformation than others, because they will play a key role in tackling the tasks ahead. These include hydrogen, E-mobility, the semiconductor industry and also railway technology.

Key hydrogen industry needs safety
Hydrogen has a high energy density and is thus considered the energy carrier of the future. With this boom, the requirements for functional safety and Industrial Security are also increasing. Because hydrogen – like all fuels – harbours high potential hazards. Tested and available safety principles from the automation industry and functional safety can also be applied to the hydrogen industry.

Safe automation technology can take on additional tasks in addition to the classic safety functions, such as dynamic pressure and temperature monitoring or safe adherence to the load limits of downstream structures. Automation also guarantees safe data exchange and the visualisation of operating conditions and diagnostic messages, where applicable.
In France, our automation system PSS 4000 already guarantees safety when hydrogen is dispensed at 10 public filling stations. The customer, a European manufacturer of hydrogen refuelling stations, was looking for an experienced safety expert. Pilz has been working in partnership with the customer since 2023, and has delivered a comprehensive safety solution, which simultaneously guarantees that the filling stations operate economically. There are currently plans to expand the cooperation to other projects.

E-mobility: Safe, efficient charging systems
The Austrian project MADELAINE – “Multi-Adaptive DC Electric Vehicle Charging Infrastructure Network” is researching new DC charging systems. The aim is a modular, flexible charging infrastructure for electric vehicles. At a charging station, in a public car park for example, several charging points can be operated in various modes. It is possible to have mixed operation, for example, where individual vehicles can be charged quickly and several others slowly. Altogether, just a few charging modules are sufficient to charge a high number of electrical vehicles with DC current, and quickly. The results from the MADELAINE project have the potential to increase efficient energy use for car park systems.

Here too, our automation system PSS 4000 is the central instance for controlling the necessary safety functions, when distributing the different charging currents to the correct charging points, for example.

Expertise for the semiconductor industry

Another key industry is the electronics industry, and the semiconductor industry in particular. The component shortage in the last few years has clearly demonstrated the importance of the supply of processors and other electronic components for the global economy.
The semiconductor industry has its own standards, in which safety has a major role to play. Alongside worker protection, these standards aim to guarantee plant productivity. Because if a hazardous situation leads to a machine standstill, that generally means production losses. A key task of safety technology, therefore, is to monitor safety functions and analyse diagnostic data, so that hazardous situations do not even arise.

Pilz successfully advises and trains semiconductor manufacturers in Asia, with the aim of identifying the right safety specifications and concepts for the respective plant. Our intelligent sensors are then used with controllers for the implementation, forming a complete solution.

Alongside classic safety, Industrial Security plays an increasingly important role: modern manufacturing sites are highly networked and digitised. Protection against manipulation thus plays an important role here. To prevent manipulation, the operators wish to be able to precisely control who has access to the plants. Our Identification and Access Management (I.A.M.) offers Safety and Security in one system. From user authentication to operating mode selection, data and network security to access management. I.A.M. solutions from Pilz are already in use in factories in Asia and Europe.

Safety for the digital railway

Rail travel is another cornerstone of the planned mobility transition. Digitisation and automation of signalling technology is a basic requirement for the necessary capacity increase of the rail infrastructure. Thanks to open interfaces and commercial off-the-shelf solutions – meaning standardised products – Pilz can help to break up previously proprietary applications. Our independent Rail Business Unit was founded in 2022 and focuses on the expansion of the portfolio and application engineering specially tailored to the railway. Pilz is already working closely with operators and system suppliers, including in the European EULYNX standard. The intention is to develop and provide uniform industry standards for new modular interlocking technology. One of these partners is the German company Pintsch, an expert in safe railway infrastructure. Pilz has entered into a long-term development partnership with Pintsch.

In the autumn, Pilz was awarded the contract for a digitisation project in Scandinavia. The Swedish Transport Administration for railway infrastructure, Trafikverket, has awarded Pilz the contract to modernise the communications infrastructure across the nationwide rail network. Based on the Pilz railway controller, data transfer will be converted from analogue, copper technology to more powerful, more reliable glass fibre technology. In future, the innovative railway control system from Pilz will take over communication between the interlockings and control cabinets on the line, based on the safe real-time Ethernet SafetyNET p. For example, it can be used to forward information about the utilisation of the line or to control signals.

In conclusion I’d like to draw your attention to Innotrans 2024. At the end of September in Berlin, Pilz will be introducing a genuine innovation in control systems at the world’s most important trade fair for the railway industry. Based on digitisation and standardisation in signalling technology, we will provide a solution that will make rail travel safer and more economical in the next few years. At Innotrans we will provide detailed information about our new modular control solution.

These are some examples, which demonstrate that: Pilz is making progress toward integrating the knowledge gained over years regarding applications and solutions for functional safety in other industries as well.

“Pilz - the spirit of safety in digital automation” outlines our offer to our customers, to work together to develop sustainable answers to the challenges of our time. This means that the requirements of safety, sustainability in the supply chain, and functional safety can be satisfied even today. Pilz is fit to meet the challenges of the present and the future, and will make companies fit too.

Caption: *Thomas Pilz, Managing Partner (Photo: © Pilz GmbH & Co. KG)*

You can find texts and images for downloading at:
https://www.pilz.com/en-INT/company/press/messages/articles/241405

Pilz – The Spirit of Safety

Pilz is a global supplier of products, systems and services for automation technology. As a pioneer of safe automation, Pilz creates safety for human, machine and environment. Founded in 1948, today the family business with its head office in Ostfildern is represented worldwide with 2500 employees in 42 subsidiaries and branches. The technology leader offers complete automation solutions for Safety and Industrial Security on the machine. These include sensor, control and drive technology – as well as systems for industrial communication, diagnostics and visualisation. An international range of services with consulting, engineering and training completes the portfolio. Pilz solutions are used in many industries beyond mechanical engineering, such as intralogistics, packaging, railway technology, or the robotics sector for example.

Pilz in social networks

In our social media channels we give you background information concerning the company and the people at Pilz, and we report on current developments in Automation Technology.

 https://www.facebook.com/pilzINT

 https://twitter.com/Pilz_INT

 https://www.youtube.com/user/PilzINT

https://www.xing.com/companies/pilzgmbh%26co.kg

 https://www.linkedin.com/company/pilz

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